

1.9
Ex 892 Ep

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF COOPERATIVE EXTENSION WORK
THE BUREAU OF PLANT INDUSTRY COOPERATING

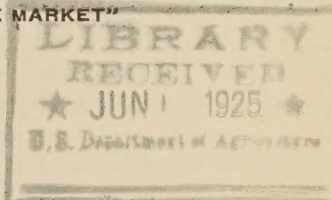
VOLUME 3

MARCH
AND
APRIL, 1925

NUMBERS 3 AND 4

The Extension Pathologist

"TO PROMOTE ECONOMIC CROP PRODUCTION,
IMPROVE THE QUALITY OF THE PRODUCTS, AND
REDUCE WASTAGE IN STORAGE, TRANSIT, AND AT THE MARKET"



THE MATERIAL CONTAINED HEREIN IS NOT FOR PUBLICATION EXCEPT BY PERMISSION FROM THE OFFICE
OF COOPERATIVE EXTENSION WORK, UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

THE EXTENSION PATHOLOGIST

Vol. 3

Nos. 3 and 4

Contents of this Issue

	Page
CORN, ROOT, STALK, AND EAR ROTS AND THE EXTENSION PROGRAM	17
Finding better seed corn in Illinois	18-21
Extension work on corn root-rot in Indiana	21-23
Outline of demonstrations on seed corn selection with special reference to internal cob discoloration...	24-26
NEWS NOTES	26-27
Extension Service handbook	26-27
M. R. Ensign begins work in Florida	27
Why potatoes run out	27
LITERATURE	28

CORN, ROOT, STALK, AND EAR ROTS AND THE EXTENSION PROGRAM

Several inquiries concerning methods used in connection with efforts to reduce losses from corn root-rot suggested the desirability of putting out a number of THE EXTENSION PATHOLOGIST, a major portion of which would be devoted to this subject. The articles from Illinois and Indiana and the Maryland project form, all given in this issue, contain interesting material along this line.

A map of Illinois marked to indicate counties in which corn culling meetings were held makes plain the fact that the State has been exceedingly well covered. The county leaders' training school and township meetings, first in the fall and later in January, have made it possible for Mr. Hackleman to multiply his influence many times. In a future issue he will report on the work done this summer and fall.

Mr. Gregory's paper also gives an account of the extension methods used in one phase of the corn work as conducted in Indiana - seed corn testing. It is interesting to note the efforts made to facilitate use by farmers of the germination test.

During the mid-winter meeting of the American Phytopathological Society, R. A. Jehle, F. W. Oldenberg, and C. E. Temple presented an abstract on "Relation of Internal Cob Discoloration to Yield in Corn". This matter of presence or absence of internal cob discoloration is the basis for the corn disease project as conducted in Maryland. It is hoped by those in charge of the work that by culling out the ears which show red, pink, gray or brown discoloration of vascular tissue, farmers will be able to develop by selection strains of corn resistant to root-rot. Results of the work to date are given in tabular form in Phytopathological abstracts: Phytopathology; Vol. 15, Jan. 1925. F.C.M.

DECLASSIFICATION AUTHORITY

1. This document contains information that is exempt from automatic declassification under the provisions of the President John F. Kennedy Library Act, 50 U.S.C. 3605, and the President John F. Kennedy Library Act, 50 U.S.C. 3605.

2. The information in this document is being released to the public under the provisions of the President John F. Kennedy Library Act, 50 U.S.C. 3605, and the President John F. Kennedy Library Act, 50 U.S.C. 3605.

3. The information in this document is being released to the public under the provisions of the President John F. Kennedy Library Act, 50 U.S.C. 3605, and the President John F. Kennedy Library Act, 50 U.S.C. 3605.

4. The information in this document is being released to the public under the provisions of the President John F. Kennedy Library Act, 50 U.S.C. 3605, and the President John F. Kennedy Library Act, 50 U.S.C. 3605.

FINDING BETTER SEED CORN IN ILLINOIS

By J. C. Hackleman

Making the corn crop of Illinois more profitable has been, is now, and probably will continue to be one of the most important crop problems of the state. The fact that approximately 33 per cent of the cultivated area of Illinois farms is devoted to this important cereal would be sufficient reason if none other existed for this statement. As always happens, when a population increases in density whether it be animal or plant the disease difficulties are likewise increased. The long continued dense corn population in Illinois has created this very condition.

Corn-disease investigations conducted cooperatively in Illinois during the past nine years have proved conclusively that the annual toll of the root, stalk, and ear-rot diseases is at least 15 per cent. There is considerable variation, some strains of corn being much more susceptible to injury than others.

These corn-disease investigations served as the basis for the corn improvement program of Illinois conducted by farm bureaus throughout the State during the past five years under the direction of the College of Agriculture of the University of Illinois.

Starting in 1920 when farmers knew very little about corn diseases, it was first necessary to prove to them by means of demonstrations that such troubles actually existed. During the seasons of 1920 and 1921, therefore, seed corn of known infection was sent out to county farm bureaus (five in 1920 and seven in 1921).

More requests were received for seed corn for these demonstration plots than could be cared for. The score card for Utility corn which was an outgrowth of the corn disease investigations suggested a new type of demonstration.

The following quotation from the "Better Seed Corn" project now in use in Illinois explains the object, a bit of the history, and the direction the work is taking:

Object.....To demonstrate that more attention should be given to the selection of seed corn; that diseases appear in every corn field in the State and can be detected without great difficulty; that it is possible to select in practically every field, ears of corn which are relatively free from disease; that seed corn can profitably be culled during the late winter and early spring; and that the germination test is essential as a final step in obtaining corn relatively free from disease.

REPORT OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

WASHINGTON, D. C.

The following report was prepared by the Bureau of Plant Industry, United States Department of Agriculture, for the purpose of showing the results of the work done during the year 1907. The report is divided into two parts, the first of which contains a general statement of the work done, and the second of which contains a detailed statement of the work done in each of the several branches of the Bureau.

The first part of the report contains a general statement of the work done during the year 1907. It shows that the Bureau has been very busy, and that it has accomplished a great deal of work. It also shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases.

The second part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

The third part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

The fourth part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

The fifth part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

The sixth part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

The seventh part of the report contains a detailed statement of the work done in each of the several branches of the Bureau. It shows that the Bureau has been very successful in its efforts to protect the crops of the country from the attacks of insects and diseases. It also shows that the Bureau has been very successful in its efforts to improve the quality of the crops of the country.

Previous Work...During the past four years there has been a gradual evolution in the type of corn improvement work done in Illinois. During the seasons of 1920-21 and even 1922 the corn-disease project calculated to convince the farmer that corn diseases actually existed was a necessary part of the work. These rapidly served their purpose and few farmers are to be found now who will doubt the serious loss^{from} corn diseases.

The next logical step was the identification of the disease symptoms in the fields and on the ears of seed corn. This has been the tendency during the past two seasons. There is probably not much reason for conducting the old-type corn-disease plot now. The next logical step is the acquainting of the farmers with the corn diseases in the field, and their symptoms on seed ears and on the seedlings on the germinator. This project therefore is designed to meet this new condition.

Counties undertaking this project are urged to start in the fall. Corn project leaders, usually two, are chosen for each community or township. These leaders are invited in for a county leaders' training school. At this meeting a half day is devoted to a general discussion of corn diseases, answering questions the leaders may have and explaining the project in some detail. The other half day is devoted to a field-selection school. This meeting held in the corn field is intended to acquaint the leaders with the typical diseased stalks, evidences of the different diseases, and in so far as possible the selection of a few typical desirable disease-free stalks and ears.

This county demonstration meeting or school is then followed by a series of meetings in the townships or communities. All local arrangements are to be made by the two local leaders who are to assist the farm adviser in holding the meeting. Many times additional school district meetings are held in which case the local leaders are in charge.

The next step in the project is scheduled for February and March. Again county demonstration meetings or project leaders' schools are held. These meetings are attended by the corn project leaders from the several communities of the county. Fifty-four such county meetings were held during the months of January, February and March with an average attendance of 51 "hand picked" men. In more than two-thirds of the counties every community was represented at these county leaders' schools.

In these schools the forenoon session, starting at 10:30, was devoted to a general discussion of the corn-disease investigations with special reference to the data correlating certain ear characters with the presence or absence of diseases and with general disease freedom. The latter part of the forenoon is devoted to a detailed discussion of the project, the methods of handling it in the county and community and something of what is expected of the project leader in conducting the community demonstration plot.

The afternoon session, starting at 1:00 p.m., is devoted entirely to corn culling. Each project leader in his invitation to attend the meeting was asked to bring a representative lot (50 ears) of his seed corn. The meeting is conducted much the same as suggested for the local meeting in order that the project leaders may get a better idea of the type of work to plan for.

The culling work is taken up under five different divisions or characteristics of the ear or kernel. When each point is mentioned it is discussed very briefly and data substantiating the type or character under consideration are given the project leaders. At many meetings the farm bureaus furnished paper and pencils and all data were copied by the project leader for use in his community meetings. The five characters considered, and the desirable characters of each are:

- (1) Weight of ear Heavy, firm.
- (2) Lustre Bright, lustrous, oily looking ears and kernels desired.
- (3) Shank Bright, silky white, glossy or nearly so.
- (4) Diseases or injury. Sound, bright kernels, no evidence of molds, free of mouse and rat injury or ears with the pericarp of the kernels broken off.
- (5) Kernel character... Medium deep, bright, oily, horny kernel, free of blisters and bleached portions which in shelling retain the tip cap.

The characters are all taken up separately. While considering weight of ear nothing else is mentioned. The light ears are all taken out and put in the culls. The same procedure is followed with 2, 3, and 4. Under point 5, kernel character, usually not to exceed 25 per cent of the original corn is left and the owner takes three kernels, one near the butt, one in the center, and one near the tip from each ear for examination. This concludes the examination, and if the owner has been fair with himself, he probably will not have left to exceed 10 per cent of the original lot of seed.

This same procedure is followed at the community meeting, except that each farmer is asked to bring 100 ears. The farm adviser takes charge, with the project leaders giving him all the assistance possible. All arrangements for the local meeting, publicity, hall in which to meet, tables for the corn, etc. are in charge of the project leaders. The attendance at these community meetings indicates how effective local leaders are in getting out their neighbors. The final county reports are not in, but meetings thus far reported have varied in attendance from 5 to 75, with 21 as an average. The most corn culled at any one of the community meetings reported thus far was 83 bushels. The most brought in by any one man was 13 bushels.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the transparency and accountability of the organization. The text also mentions the need for regular audits to ensure that all financial data is correctly recorded and reported.

2. The second part of the document outlines the procedures for handling financial transactions. It details the steps involved in processing payments, from the initial invoice to the final payment confirmation. The text also discusses the importance of maintaining proper documentation for all transactions, including receipts and invoices, to ensure that all financial activity is properly recorded and auditable.

3. The third part of the document addresses the issue of budgeting and financial planning. It explains how the organization's budget is developed and how it is used to guide financial decisions. The text also discusses the importance of monitoring financial performance against the budget and making adjustments as needed to ensure that the organization remains on track financially.

4. The fourth part of the document discusses the role of the finance department in the organization. It describes the various functions of the finance department, including financial reporting, budgeting, and financial planning. The text also emphasizes the importance of the finance department in providing accurate and timely financial information to management and other stakeholders.

5. The fifth part of the document discusses the importance of financial control and risk management. It explains how the organization implements financial controls to ensure that all financial transactions are properly recorded and reported. The text also discusses the various risks associated with financial management and how the organization manages these risks to ensure the stability and security of its financial position.

6. The sixth part of the document discusses the importance of financial transparency and accountability. It explains how the organization ensures that all financial information is accurately recorded and reported to management and other stakeholders. The text also discusses the importance of maintaining proper documentation for all financial transactions to ensure that all financial activity is properly recorded and auditable.

This brings the project up to the stage in which we stand at the present time. The only additional point is that the project leaders have their seed corn ready for the demonstration plot - a small amount of the very best they can get, and a similar amount of the undesirable seed which they culled out. These two lots are to be planted side by side and compared with each other and with the best seed the farmer could get out of the remainder of his seed corn.

EXTENSION WORK ON CORN ROOT-ROT IN INDIANA

By C. T. Gregory

The modified rag-doll type of corn germinator was first developed in 1920. It was the offspring of investigations conducted at Purdue University Agricultural Experiment Station. This type of germinator has several advantages. It enables one to detect diseased ears without permitting spread of the fungi, as well as the ears showing low germination, and also because of its compactness makes it possible to test a large amount of corn in a very limited space. It lends itself to the plan of community testing stations.

This method of testing corn has been carried on by vocational classes, in county agent offices and by farmers' organizations under the direction of county agents. The first community testing by the modified rag-doll method was done by the vocational class at Shelbyville High School in 1920, when 14,500 ears were tested. In 1924, 72 testing stations were reported. In many instances vocational classes have taken up the work for the benefit of the farmers in their community. County agents in several instances have erected corn racks in their offices and have installed a corn germinator box.

At first the testing was carried out under the immediate supervision of the county agent, vocational teacher, or the extension specialist. During the past two years, however, several community testing stations have been in direct charge of some farmer or a man who has become adequately trained to read the tests, and the corn passed in these tests has been shown to be of better quality and to yield better than the discarded corn. In Johnson County, a manager and four assistants are in charge of the testing station. These men tested 2,500 bushels of corn in 1924.

In order to sell the idea of testing and to prove its value, various kinds of demonstrations have been conducted in different counties. In Johnson County the farmers whose corn is to be tested on a certain day are invited to come to the testing station to see the tests. Once every week the business men of Franklin are invited to see the tests and to get an idea of the nature of the work. Field demonstrations were made in this county by planting the good and the discarded ears in parallel rows. It

...the ... of ...
...the ... of ...
...the ... of ...

...
...

...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...



Fig. 1. Community testing station at county agent's office

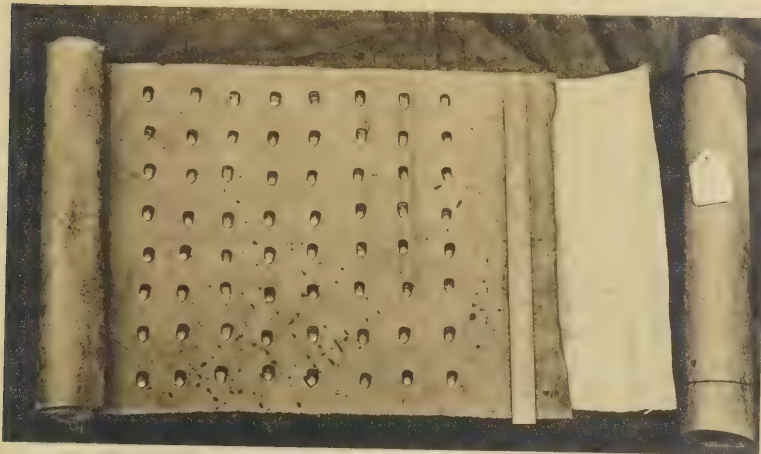


Fig. 2. Rag doll and method of placing the corn



Fig. 3. Small germinator box for use in farm room. Hot water poured on packing helps maintain the temperature.

was found that the good corn yielded 11.88 bushels more to the acre than the discarded ears, or 64.77 bushels per acre as compared with 52.89 bushels respectively. On the 12,500 acres planted in Johnson County with tested corn, there was an increase of 131,000 bushels.

In Greene County, both healthy and diseased ears were used in field demonstrations. In each case, the ears germinated 100 per cent, and it was found that the healthy corn yielded 13 bushels more per acre than the diseased ears. In Noble County, a demonstration was carried out to prove the value of field selection over crib selection. Eighty-five farmers brought 27,992 ears to be tested; of these farmers, 59 had field selected and 26 had crib selected. The germination test showed that 51 per cent of the field-selected corn was good, while only 36 per cent of the crib-selected corn could be passed. Demonstrations such as these have proved the value of testing. Further interest has been created by placing the rag-doll tests in store windows with the corresponding ears to show that good-looking ears may be badly diseased.

In practically every case the modified rag-doll method of testing is used, and from 6 to 10 kernels from each ear are placed on the cloth. The germinator boxes are usually heated by electricity to a temperature of about 80° F. In six or seven days after placing the dolls are read. Usually 20 ears are placed in each doll, and the ears are placed in a rack so that the diseased ears can be removed and discarded. In some cases the farmers are sent small envelopes in which the required number of kernels can be sent to the testing station. Under this arrangement the farmers number each envelope to correspond with the number on the ear. Upon receiving the report from the station, he can readily discard the diseased corn. This method has been found to be thoroughly satisfactory, and does away with the extra equipment and space needed in the county agent's office for the storage of the corn.

There is no question of the value of these tests if the continued interest of the farmers in the work is any criterion. Incomplete reports show that about two million ears were tested in 1924. Thirty-seven county agents have undertaken this testing as a major project, and practically every vocational class in the State is conducting one of these corn germination tests by the rag-doll method. In no case has this work been discontinued once it was started. Conservative estimates based on reports from all parts of the State have been made of the value of this project. About 30 per cent of the two million ears tested were discarded, leaving 1,400,000 planted on approximately 140,000 acres. This high-grade, disease-free corn increased the yield fully 1,120,000 bushels, having a value of \$840,000. The cost of testing was about \$30,000, or at the rate of a cent and one-half an ear, yielding a net profit to farmers of Indiana who had this testing done, of \$810,000.

Bulletins: Purdue Extension Bulletin 97, Corn Testing.
Purdue Extension Circular 108, Field Selection.

OUTLINE OF DEMONSTRATIONS ON SEED CORN SELECTION WITH
SPECIAL REFERENCE TO INTERNAL COB DISCOLORATION

Conducted by: Dr. R. A. Jehle, Specialist in Plant Pathology
F. W. Oldenburg, Extension Agronomist
County agents

Object.- To show that increased yields of better quality corn can be obtained when freedom from internal cob discoloration is considered as an additional factor in the usually approved methods of selecting seed corn. There is considerable evidence that freedom from internal cob discoloration indicates resistance to root-rot.

Procedure.- The demonstrator is required to have his seed corn selected. Under Maryland conditions this selection is usually done in the field at husking time. The seed selected should be stored in a dry, well ventilated place, and not be exposed to freezing temperatures till it is dry.

When the demonstration is put on, the seed corn will be carefully culled over by the specialist, and the county agent, and all ears discarded that show undesirable seed qualities such as:

- (1) Mouldy cobs or kernels,
- (2) Badly shredded or badly discolored shank,
- (3) Badly blistered or checked kernels,
- (4) Dull, soft, or starchy kernels,
- (5) Discolored germs,
- (6) Off type ears, if purebred corn.

To allow for such careful culling, the demonstrator should have a large supply of seed selected.

It is desirable that seed so selected should be tested for germination.

Internal cob discoloration.- The seed corn so selected should be treated as follows: Instead of shelling off the butts and the tips, they should be cut off. To do this a sharp corn knife is better than an ax or a hatchet, since less shattering occurs. Thus cut, the inside of the cob can be examined at both ends and a further examination of the grains made for undesirable qualities.

The corn is divided into three lots according to the intensity of the discoloration. The ears showing no discoloration should be put into lot 1; those showing but little cob discoloration into lot 2; and those showing intense discoloration into lot 3. Different strains of corn vary greatly as to the relative amount of seed that will go into each lot. On the average about 10 per cent will fall into lot 1. A few strains of corn have been found where as high as 80 per cent of the corn went into this lot. On the

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

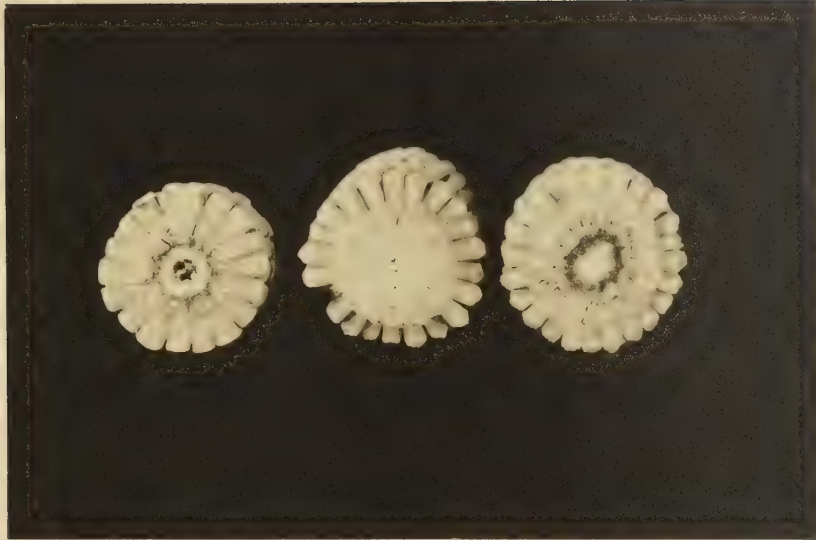


Fig. 4. Seed selection in Maryland. The cob in the center is free from internal discoloration, while those at left and right show a dark ring. The hollow cob at left has no relation to the discoloration. See Page 26, Par. 2.

other hand, there have been instances where so great a proportion fell into lot 3, that no demonstration was possible.

The demonstrator should use lot 1 for his seed. If there is not enough of this he should complete his field with seed from lot 2, except that one shock row is to be planted with seed from lot 3 to get a comparison of yield.

Special effort should be made to locate this shock row so that soil and other conditions are similar to some shock row in which seed from lot 1 was planted. He should also see that at cutting time it is actually put into a separate shock row and not mixed with other corn.

The county agent is required to keep in touch with the demonstrator and arrange a time for husking when the specialist can be present to compute the yield.

The corn from at least 5, better 10, shocks from each lot, carefully selected so that they are representative, is carefully weighed up, and the yields computed.

NEWS NOTES

Extension Service Handbook

In accordance with the recommendation of the Committee on Extension Organization and Policy, which was adopted by the American Association of Land-Grant Colleges at the annual meeting held in Chicago, November 12 to 14, 1923, the Department of Agriculture has under preparation an Extension Service handbook. Work on this handbook has been in progress since the Chicago meeting, and the material is about ready for the press.

The handbook will be composed of 20 divisions, as follows: (1) General, (2) agricultural economics, (3) agricultural engineering, (4) agricultural technology, (5) animal diseases, (6) animal husbandry, (7) dairying, (8) entomology, (9) fertilizers, (10) field crops, (11) forestry, (12) horticulture, (13) plant diseases, (14) soils, (15) weather, (16) wild life, (26) economics and management in the home, (27) foods and nutrition, (28) housing, equipment, and furnishing, (29) textiles and clothing.

Each of the above divisions (subjects) have been completely classified according to the decimal system. The master classification key will be published in loose-leaf form, by sections, as an appendix to the handbook. This key will be the basis for the classification of the material in the first issue, and for all future releases of loose-leaf sheets (size of sheet 6-3/4 inches by 3-3/4 inches).

The various classification keys will help to standardize the treatment of these subjects for the Department of Agriculture, and may be of assistance in the coordination of similar work in the States.



An Extension Service handbook mailing list will be maintained so that workers having handbooks will automatically receive their supply of loose pages when printed and released for distribution.

T. Weed Harvey

We are inclosing with this issue a mimeographed copy of a key to the plant-disease section of the handbook. It is hoped that as a result of sending this out some constructive criticism of the method used in organizing the subject will be received. The material which will be contained in this section has been contributed by the plant pathologists of the Bureau of Plant Industry.

F. C. M.

M. R. Ensign Begins Work in Florida

Friends of M. R. Ensign will be interested to hear of his return to the Extension field. On February 15 he began work as extension entomologist-pathologist in Florida. Mr. Ensign's early training was received at the Utah Agricultural College from which he graduated with the degree of B.S. in Agriculture in 1912, and at Cornell University where he received the degree of M.S. in plant pathology in 1917. Additional postgraduate work was done at Washington University, St. Louis, Missouri. He has had varied experience as Assistant in Horticulture at the Utah Experiment Station, teacher of biology and agriculture in the Utah high schools, assistant in plant physiology at Cornell University, field pathologist for the New York State Food-Supply Commission, and extension plant pathologist for the U. S. Department of Agriculture in 1918 to 1919. While employed by the Department he was engaged in teaching methods of control for the diseases of cotton, truck, and forage crops in Arkansas. Subsequent to his departmental service he has had teaching and business experience in the south.

In a letter of April 11 Mr. Ensign states that he has demonstrations in cucumber and melon work under way at this time.

Why Potatoes Run Out

Farmers' Bulletin 1436, Why Potatoes Run Out, by Dr. Eugene S. Schultz, is now available. If additional copies of this bulletin are desired, they may be obtained by addressing either this office or the Office of Cotton, Truck and Forage-Crop Disease Investigations. In planning potato improvement work, don't forget that the Department has a movie on the subject. The one reel picture "Hidden Foes in Seed Potatoes" may be obtained by addressing F. W. Perkins, In Charge, Motion Picture Laboratory, U. S. Department of Agriculture.

LITERATURE

Alabama:

Humphrey, C. J., and Miles, L. E., Dry-rot in buildings and stored construction materials, and how to combat it. Ala. Polyt. Inst. Ext. Circ. 78, 24 p., illus. Feb., 1925.

Delaware:

Orchard spray program for 1925, Univ. of Del. Ext. Circ. 18, 8 p., Jan. 1925.

Florida:

Watson, J. R. and Beyer, A. H., Controlling the citrus aphids, Univ. of Fla. Bul. 174, 96 p., illus. Mar., 1925.

Georgia:

Boyd, O. C., Sweet potato seed improvement, disease control, and rules pertaining to the plant industry. Ga. St. Bd. Ent. Bul. 67, 10 p., Feb. 1925.

Boyd, O. C., Spraying and dusting watermelons for anthracnose control. Ga. St. Bd. Ent., Mimeo. Circ; 2 p.

Kansas:

The value of Extension organization, Ka. St. Agr. Col. Ext. circ. 50; 10 p., Feb. 1925.

Indiana:

Gardner, M. W., and Kendrick, J. B., Potato leaf roll in Indiana. Purdue Uni. Agr. Exp. St. Bul. 284., 23 p. illus., July 1924.

New Jersey:

Poole, R. F. The stem rot of sweet potatoes, N. J. Agri. Exp. Sta., Bul. 401; 32 p. illus.

Contributions or suggestions with regard to subjects that might profitably be discussed in this news sheet should be addressed to:

Fred C. Meier,
Extension Pathologist,
United States Department
of Agriculture,
Washington, D. C.

MEMORANDUM

TO : THE SECRETARY OF THE ARMY
FROM : THE CHIEF OF THE ARMY
SUBJECT: [Illegible]

1. [Illegible]

2. [Illegible]

3. [Illegible]

4. [Illegible]

5. [Illegible]

6. [Illegible]

7. [Illegible]

8. [Illegible]

9. [Illegible]

10. [Illegible]

11. [Illegible]

12. [Illegible]